

CLAIMS

That which is claimed is:

1. A vascular occlusion coil deployment system for use in
- 5 placing a coil at a preselected site within a vessel comprising:
 - an elongated flexible positioning member having a lumen extending therethrough and having proximal and distal ends;
 - an embolic coil;
 - an elongated flexible delivery member being slidably
- 10 positioned within the lumen of the positioning member and having proximal and distal ends;
 - a heating element mounted on the distal end of the delivery member;
 - a non-optical energy transmission conductor extending
- 15 through the lumen of the positioning member and extending from the proximal end to the distal end of the delivery member, said energy transmission conductor being coupled to said heating element; and,
- a non-metallic heat responsive coupling member coupled to
- 20 the heating element and coupled to the embolic coil, said heat responsive coupling member exhibits the characteristic of, upon being heated, releasing the embolic coil at the preselected site.

2. A vascular occlusion coil deployment system as defined in
Claim 1, wherein said heating element is an electrically heated
coil.

5 3. A vascular occlusion coil deployment system as defined in
Claim 2, wherein the yield strength of said heat responsive
coupling member is reduced when heated.

10 4. A vascular occlusion coil deployment system as defined in
Claim 2, wherein said heat responsive coupling member is bonded to
the embolic coil and wherein the yield strength is reduced when
heated.

15 5. A vascular occlusion coil deployment system as defined in
Claim 1, wherein the yield strength of said heat responsive
coupling member is reduced at least 50 percent when heated to about
65 degrees Celsius.

20 6. A vascular occlusion coil deployment system as defined in
Claim 1, wherein said heat responsive coupling member is bonded to
the embolic coil and wherein the yield strength is reduced at least
50 percent when heated to about 65 degrees Celsius.

7. A vascular occlusion coil deployment system as defined in Claim 1, wherein said heat responsive coupling member is adhesively bonded to the embolic coil and wherein the yield strength is reduced at least 50 percent when heated to about 65 degrees 5 Celsius.

8. A vascular occlusion coil deployment system as defined in Claim 1, wherein said coupling member is formed of a polymer.

10 9. A vascular occlusion coil deployment system as defined in Claim 2, wherein said coupling member is formed of a polymer.

10. A vascular occlusion coil deployment system for use in placing a coil at a preselected site within a vessel comprising:

15 an elongated flexible positioning member having a lumen extending therethrough and having proximal and distal ends;
 an embolic coil;
 an elongated flexible delivery member having a lumen extending therethrough and being positioned within the lumen of
20 the positioning member and having proximal and distal ends;
 a heating element mounted on the distal end of the delivery member;

 a non-optical energy transmission conductor extending through the lumen of the delivery member and extending from the

proximal end to the distal end of the delivery member, said energy transmission conductor being coupled to said heating element; and,

a non-metallic heat responsive coupling member coupled to
5 the heating element and coupled to the embolic coil, said heat responsive coupling member exhibits the characteristic of, upon being heated, releasing the embolic coil at the preselected site.

11. A vascular occlusion coil deployment system as defined in
10 Claim 10, wherein said heating element is an electrically heated coil.

12. A vascular occlusion coil deployment system as defined in
Claim 11, wherein the yield strength of said heat responsive
15 coupling member is reduced at least 50 percent when heated to about
65 degrees Celsius.

13. A vascular occlusion coil deployment system as defined in
Claim 10, wherein said coupling member is formed of a polymer.